



Effective Health Care

Percutaneous Coronary Intervention vs. Optimal Medical Therapy for Adults with Stable Angina Nomination Summary Document

Results of Topic Selection Process & Next Steps

- Percutaneous coronary intervention (with drug-eluting stents) versus optimal medical therapy for adults with stable angina is not feasible for a full systematic review due to the limited data available for a review at this time.

Topic Description

Nominator: Public payer

Nomination Summary: The nominator is interested in the comparative effectiveness of percutaneous coronary intervention (PCI) plus optimal medical therapy (OMT) versus OMT alone for adult patients with stable angina. The nominator is primarily interested in PCI with drug-eluting stents versus OMT.

Staff-Generated PICO:

Population: Adults (> 18 years old) with stable angina (chronic coronary artery disease) including subgroups of patients based on demographic factors (e.g., age, sex, and race) or indicators of adverse risk (e.g., recent myocardial infarction with or without subsequent angina, severity of disease, and number of vessels involved). Excluded patients include those who meet currently accepted indicators for an invasive treatment strategy.

Intervention: PCI (with drug-eluting stents) plus OMT

Comparator: OMT (as currently recommended in professional society guidelines)

Outcomes: Rates of death (all cause and coronary heart disease), non-fatal myocardial infarction, revascularization, and rehospitalization; quality of life (short and long term)

Key Questions from Nominator:

1. What is the comparative effectiveness of PCI plus OMT compared to OMT in reducing the risk of death and non-fatal MI and secondarily revascularization rates and re-hospitalization and in improving quality of life (short and long term)?
2. Does the comparative effectiveness of PCI plus OMT compared to OMT vary for patient subgroups based on demographic factors (e.g., age, sex, race) or indicators of adverse risk (e.g., recent myocardial infarction with or without subsequent angina, severity of coronary artery disease or number of vessels involved +/- left anterior descending artery)?
3. What are the harms from PCI plus OMT compared to OMT alone?

Considerations

- The topic meets EHC Program appropriateness and importance criteria. (For more information, see <http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/>.)
- PCI has been shown to reduce angina and the need for medication, while improving exercise performance, dyspnea, and quality of life in patients with stable coronary artery disease; however, PCI has not clearly been shown to be superior to medical therapy or reduce cardiac morbidity and total mortality in this patient population. Results of the Clinical Outcomes Utilizing Revascularization and Aggressive Drug Evaluation (COURAGE) trial in 2007 support the use of medical management in patients with stable coronary artery disease. The study found that as an initial management strategy in patients with stable disease, PCI did not reduce the risk of death, myocardial infarction, or other major cardiovascular events when added to optimal medical therapy. PCI guideline developers recommend that PCI be reserved for patients who are refractory to medical therapy or who otherwise have acute coronary syndromes or unstable angina.
- PCI stenting procedures today most commonly use drug-eluting stents; however, the research data available for systematic review generally represents patients who have received bare metal stents. A search in several databases for existing and ongoing trials comparing PCI with drug-eluting stents and OMT did not yield a large volume of literature. Sufficient literature is not yet available comparing patients who have received drug-eluting stents versus OMT. Therefore, a systematic review that compares PCI with drug-eluting stents and OMT is not feasible for a full systematic review due to the limited data available for a review at this time.
- Two recent systematic reviews were identified as relevant to this topic.
 1. Wijeyesundera HC, Nallamothu BK, Krumholz HM, Tu JV, Ko DT. Meta-analysis: effects of percutaneous coronary intervention versus medical therapy on angina relief. *Ann Intern Med.* 2010;152:370-379
 2. Trikalinos TA, Alsheikh-Ali AA, Tatsioni A, Nallamothu BK, Kent DM. Percutaneous coronary interventions for non-acute coronary artery disease: a quantitative 20-year synopsis and a network meta-analysis. *Lancet.* 2009;373(9667):911-8